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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/588,617	06/06/2000	Claude L. Bertin	BUR9-1999-0264-US1	1077

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EXAMINER

NGUYEN, TRUNG Q

ART UNIT PAPER NUMBER

2829

DATE MAILED: 11/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/588,617

Applicant(s)

BERTIN ET AL.

Examiner

Trung Q Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35-U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Rostoker et al. (U.S. 5,594,626).

Regarding claims 1-3, 30-32, Restoker et al. disclose in Figures 6 and 14B and 15 a method for manufacturing and testing semiconductor components comprising plurality of semiconductor devices 1406 of Fig. 14B, a device carrier 600 of Fig. 6 having interconnect wiring therein (not shown), attaching semiconductor devices via chip or die [column 14, lines 30-37] to carrier 600; testing devices via wiring 614; dividing carrier 1408 of Fig. 14B into a plurality of components 1406 wherein each component 1406 contains at least one semiconductor device 600 wherein carrier 600 can be install to 1408 without separating device from carrier (Fig. 15).

Regarding claim 4, Restoker et al. disclose in Figures 6 and 14B carrier 600 comprises a printed circuit board 602.

Regarding claim 5, Restoker et al. disclose in Figures 6 and 14B semiconductor devices comprising plurality of leads 614 of Fig. 6 for external connection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A person shall be entitled to a patent unless –

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 13-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rostoker et al. (U.S. 5,594,626) in view of Kaneko et al. (U.S. 5,534,786).

Claims 13-18 and 21 add the limitation of running test independently of each of semiconductor devices, connecting leads in common and multi-chip assemblies.

However, Rostoker Kaneko et al. disclose semiconductor devices (3) are organized in a plurality of groups on carrier (3 and 6 of Fig. 5); and testing groups of devices in parallel with a separate reader (9) for each group; a running semiconductor devices simultaneously independently of each other and single-in-line multi-chip modules assemblies (6, 7 and 8 of Fig. 5). Kaneko also discloses a step of mounting semiconductor component on a second carrier (7 and 8 of Fig. 5) wherein second carrier comprises a printed circuit board (column 4, lines 36-40).

Therefore, at the time of the subject invention, it would have been obvious for a person of ordinary skill in the art to use the above steps as taught by Kaneko et al for

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the purpose of measuring the values of grating points and ensuring the positions of the each of the chip or die at the arbitrary positions with high accuracy and at a high rate.

Regarding claims 22-27, Kaneko et al. disclose the step of encapsulating semiconductor device and carrier (3 and 6 of Fig. 5) in an encapsulant (5); identifying and repairing defective semiconductor devices (column 3, 20-45 and column 5, lines 23-32).

Regarding claims 28-29, Kaneko et al. disclose the semiconductor devices are memory chips (column 4, line 48) and a step of testing functionality (column 5, lines 7-14).

Allowable Subject Matter

5. Claims 6-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: claim 6 recite, inter alia, "a built-in self-test engine (BIST), wherein, the BIST is a memory chip can provide patterns for burn-in and for final chip testing at speed, BIST engine may include complex patterns or perform redundancy calculations among other tasks." The art of record does not disclose the above limitations, nor would it be obvious to modify the art of record so as to include the above limitations.

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Response to Arguments

6. Applicant's arguments with respect to claims 3-5 have been considered but are moot in view of the new ground(s) of rejection. Base upon the remarks, the examiner has withdrawn the claims rejection using Nakata (U.S. 5,945,834). However, base upon the remarks, the examiner is now introducing Rostoker et al. (U.S. 5,594,626), which covers what is claimed.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trung Nguyen whose telephone number is 703-305-4925. The examiner can normally be reached on Monday through Friday, 8:30AM^{*}–5:00PM. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-5841. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cuneo Kammie can be reached at (703) 308-1233.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-0956.


**KAMAND CUNEO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800**

TN
November 15, 2002